

ABUSIR AND SAQQARA IN THE YEAR 2025

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ABSTRACTS



CZECH INSTITUTE
OF EGYPTOLOGY
Faculty of Arts
Charles University

— KEYNOTE LECTURES —

UNVEILING THE INTERIOR SYSTEM OF SAHURA'S PYRAMID AT ABUSIR

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Egyptian Ministry of Tourism and Antiquities (MoTA)

Since 2019, an ambitious conservation project within the pyramid of Sahura at Abusir has led to ground-breaking discoveries, shedding new light on the structure and burial practices of ancient Egypt. The primary goal of the project was to carefully clean, explore, and stabilize the interior chambers of the pyramid, a task that has proven to be both complex and rewarding. Over the course of the project, hundreds of fallen blocks and debris were carefully removed, granting access to parts of the pyramid that had been obscured for centuries.

This meticulous work revealed for the first time the actual internal design of the pyramid, including an antechamber and an extensive system of storage magazines. These storage areas, the largest ever found in an Old Kingdom pyramid, provide important clues about the pyramid's function and the organization of goods associated with the royal burial. Along with the storage magazines, the team uncovered the first confirmed remnants of the burial chamber's original walls.

However, the most significant and unexpected discovery came with the exploration of the final third of the burial chamber. This part of the tomb had remained largely inaccessible until now, and its examination has dramatically altered our understanding of the pyramid and its original purpose. The uncovering of this area has provided new evidence about the final resting place of King Sahura, offering crucial insights into his burial practices and the architectural layout of his pyramid.

These findings not only enhance our knowledge of Sahura's reign but also contribute significantly to the broader understanding of pyramid construction and royal tombs during the Fifth Dynasty. The information gathered during this project will undoubtedly

inform future archaeological research and help preserve this monumental site for generations to come.

THE MASTABA OF RASHEPSES LS16 AT SAQQARA

HANY EL-TAYEB

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Egyptian Ministry of Tourism and Antiquities (MoTA)

The mastaba of Rashepses, represent an extraordinary monuments dating to the reign of Djedkara (5th Dynasty c. 2414- 2375 B.C), the mastaba attracted much publicity in the 19th century but after conducting fieldwork I intend to re evaluable this remarkable monument in light of new fieldwork I carried out of the site.

Rashepses mastaba contains 29 chambers and passages, making it the largest Old Kingdom mastaba in Saqqara belonging to one person. Rashepses held 37 titles, including vizier chief Justice and "overseer of upper Egypt"; he may have been the first to hold this title. The mastaba is also the earliest with a decorated burial chamber, and contains several rare scenes.:

The first documented exploration of the tomb was undertaken by Karl Richard Lepsius who briefly explored a small part of the tomb and copied some of its scenes and inscriptions. In 1907 and 1908 James E. Quibell pursued a brief campaign in the mastaba. Since 2009, the exploration of the tomb was continued by a team of the Supreme Council of Antiquities headed under my direction.

Previously unknown parts of the mastaba were cleaned, including a room with a false-door. The newly explored parts of the tomb revealed a partly-preserved relief decoration of extraordinary quality well-preserved polychrome.

PTOLEMAIC SAQQARA: ITS ANIMAL INHABITANTS

SALIMA IKRAM

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While Saqqara and Abusir are best known for their pyramid complexes and monuments of the Old Kingdom, its later history is not as well studied, explored, or even valued. As Harry Smith used to say, people forget that Saqqara is a stratified site, starting its history probably in the pre-dynastic period and then continuing on throughout the early Coptic era. It is only relatively recently that the New Kingdom and Late Period exploitation of Saqqara has been a focus of attention, while the Ptolemaic periods of occupation and use of this ancient cemetery remain marginalised. This is in part because these eras do not yield as many impressively decorated monuments as the earlier periods, and also possibly because the majority of the inhabitants of the cemeteries were not human. However, this perception of Saqqara is gradually changing with more work and attention being paid to the post-New Kingdom use of the site. In this presentation I will touch briefly on the use of Saqqara after the New Kingdom, and focus on its role in Ptolemaic times and its non-human inhabitants.

ABUSIR AND SAQQARA AT GIZA:
HISTORICAL CONTEXT OF THE MENKAURE VALLEY TEMPLE

MARK LEHNER

Ancient Egypt Research Associates (AERA)

The purpose of this talk is to update colleagues about AERA findings from nine seasons (2005–2024) of investigation in and around the Menkaure Valley Temple (MVT), and to convey evidence of how of 5th Dynasty kings, from Userkaf to Niuserre, invested in this temple.

AERA's reinvestigation of the Menkaure Valley Temple (MVT), 115 years after Reisner excavated and backfilled, reveals four major phases: (Dan Jones provides the evidence of these phases in his talk for this conference). Reisner's schematic plan of the MVT, which most publications use, is largely the 5th Dynasty Middle Temple (MVT-2). As often published, this plan omits the Ante-temple (previously thought to be the valley temple of Khentkawes I), an unusual broad entrance ramp, or causeway, on the north; an altar at the top of the ramp; and a drainpipe from the altar into a huge, stepped, stone-lined basin. The ramp and altar show similarities to the causeway and altar in Userkaf's sun temple. The MVT broad ramp, altar, drain and basin may relate to cattle and meat offerings. When AERA sieved and wet-sieved Reisner's backfill from his excavation of settlement in the court, we found abundant cattle bone (as well as flint knives, sickle blades, sealings, and parts of statues).

Like the valley temple of Userkaf's sun temple, the MVT was not a transit temple. People did not need to move through it to get into the causeway and to proceed to the upper pyramid temple. The MVT was a free-standing temple in its own right, with certain affinities to the two known sun temples. Those sun temples were contemporaneous with the MVT First Temple – MVT-1, completed in mudbrick, probably by Shepseskaf and Userkaf – and the Middle Temple – MVT-2, probably rebuilt under Niuserre. (MVT-3, Reisner's "Second Temple," is a 6th Dynasty rebuild).

We must understand the MVT together with the Khentkawes Town (KKT) and the Silo Building Complex (SBC), which AERA excavated across the harbor basin from the KKT in 2011-12. From this ensemble, David Jeřábek identified sealings of Menkaure, Userkaf, Sahure, Neferirkare, Raneferef, and Niuserre. Two sealing fragments show traces of *hm-ntr* titles for the sun temples, including a priesthood of Ra and Hathor.

What accounts for this interest of the Sons of the Sun in Menkaure's valley temple? After heavy flash floods damaged the temple, why did kings extensively rebuild the MVT over 300 years?

An answer must lay within the origins of the MVT in the reign of Menkaure, and the tight, dyadic, relationship between the MVT and KKT, including the eastward extension of the KKT to the SBC. Menkaure's builders founded the MVT in a deep and chthonic, womb-like, quarry basin, directly below a bedrock tower that rises more than 20 meters above the MVT floor. Quarry workers purposefully reserved this bedrock tower during three generations of extracting stone for the pyramids of Khufu, Khafre, and Menkaure. This tower became the pedestal for the monument of a queen mother, Khentkawes I.

When major quarry work and pyramid building stopped, probably when Menkaure died, his valley temple was unfinished. It was barely laid out in stone. But Khentkawes I's monument stood complete. Her name and titles had already been inscribed on the granite doorjambs and colossal granite false doors of her chapel. Although it may signal the need to break long-standing (and lengthy) chains of inference, facts on the ground suggest that when Menkaure died, Khentkawes I was already the mother of two kings (leaving queen-mother Khamerernebtj I, perhaps, the mother of Shepseskaf and Userkaf). Facts on the ground make it unlikely that Shepseskaf, or any later king, finished Khentkawes I's granite accoutrements and inscribed them with her titles.

Of course, facts, including newly observed facts, compel us to try to put these puzzle pieces into new chains of inference, as long and tenuous as these chains must be, given the paucity of evidence. We can agree on a sense of odd and intimate relations between 5th Dynasty royalty at Abusir and Saqqara and 4th Dynasty royalty at Giza. (Why would a 5th Dynasty official like Debehen forgo, in his tomb inscriptions – as survived – any association with his contemporary home court, and concoct, as scholars infer, a biography that associated him with Menkaure? Why would a 5th Dynasty official like Iunre forgo any association with his contemporary home court and ruler to concoct, as

some scholars infer, a title, “The King of Upper and Lower Egypt, Khafre: His Eldest Son of His body”?) Not least of these inter-dynastic relations, we have three queen mothers named Khentkawes. The first two bore the geminated title *mwt njswt bjti, njswt bjtj*. Whether or not we are correct in seeing a genetic tendency toward twins (or just brothers) ascending the throne, the greater archaeological and architectural tableau of the MVT, KKT, and SBC compels us to consider that Khentkawes I and her two sons reigned before Shepseskaf.

In the MVT and elsewhere at Giza, we see the influence of Abusir and Saqqara, of the Sons of the Sun, not only because “they saw themselves as true successors of ancient and famous rulers,” to paraphrase Miroslav Bárta. They saw themselves as successors of the kings who first identified themselves as “Son of the Sun.”

—LECTURES—

GENDER DIVERSIFICATION IN THE MATERIAL CULTURE OLD KINGDOM CERAMIC VESSELS IN THE BURIAL GOODS

KATARÍNA ARIAS

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The archaeological exploration of the Memphite region of the Old Kingdom shows that despite high numbers of tombs that were preserved, only selected strata of society were represented (or explored). Not only is there a predominance of tombs that belonged either to members of the royal family or high and middle-ranking officials, but also, the excavated tombs were dominated greatly by male burials. Female members of the society were buried only exceptionally in their own independent tombs (with several notable exceptions, several of them coming also from Abusir, see i.e. Verner – Callender 2002; Krejčí 2015; etc.). They were rather interred in subsidiary shafts in the tombs of their husbands, fathers or other relatives.

Thus, it is possible to state that Egyptian funerary customs reflected a very androcentric society, i.e. one dominated by males and their interests (cf. Roth 1999; Bárta 2002). Given the fact that most of the high administrative positions in the country were in the hands of men (for exceptions, see e.g. Fischer 1989), this comes as no surprise. As an example, the analysis of hundreds of shafts from tombs of various social strata at Abusir showed the prevalence of male burials. The aim of this paper is to analyse a specific type of burial goods, namely ceramic vessels, their typological occurrence, morphometric properties, general quality and quantity, as well as other attributes, in the attested female burials. As a result, this paper should offer a comparison between the burial chambers of male versus female owners of similar social standing, and highlight their similarities or differences.

**FRAGMENTS OF RELIEFS NEWLY FOUND IN THE TOMB OF DJEHUTYEMHAT AT ABUSIR
ORIGINALLY FROM THE SEPULCHRE OF MENEKHIBNEKAU OR FROM WHERE?**

LADISLAV BAREŠ – DANA BĚLOHOUBKOVÁ

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During the excavation of the Late Period shaft tomb of Djehutyemhat at Abusir, a huge number of limestone fragments, larger and smaller, was found in the small lateral shaft that gave access to the burial chamber. More than a thirty of those blocks, that almost completely filled the small lateral shaft from the depth of about four metres up to the entrance to the horizontal corridor leading to the burial chamber (at a depth of 13.5 metres), were decorated with remnants of various scenes and texts in relief. Together with them, a small undecorated pyramidion was found. In the paper, those artefacts are discussed, including their possible place of origin. Several hints, such as the partly preserved name of Menekhibnekau's father or the general similarity of those fragments with those found in the nearby tomb of Menekhibnekau seem to suggest that those newly found blocks (including perhaps the pyramidion) come from the superstructure of that sepulchre. Other possible places of origin cannot be excluded *a priori* but are much less probable.

The talk will also introduce fragments of the relief decoration from these blocks. These blocks offer a unique opportunity to discuss which topics were likely emphasized in the decoration of the superstructure of Late Period shaft tombs, as they represent the only available corpus of such scenes.

MARIETTE'S SAQQARA CEMETERY – A REASSESSMENT

MIROSLAV BÁRTA

Czech Institute of Egyptology, Charles University

Auguste Mariette excavated a significant number of mastabas located in the area north of the pyramid complex of Djoser and west of the tomb of Ty. The only posthumously published book *Les mastabas de l'ancien empire: fragment du dernier ouvrage de A. Mariette* (appearing in 1889 and edited by Gaston Maspero), summarising principal excavation results of several dozens of tombs and mastabas dating to different periods of the Old Kingdom only indicates the potential of the zone of antiquities for future analysis. It is the only publication making available archaeological reports on the discovery of about 150 tombs in a single volume...

Since 2018, the Czech Institute of Egyptology has revised some tombs in the so-called Cemetery of Ty. Focusing principally on re-excavation and documentation of the tomb complex of Ty, several adjacent tombs labelled Mariette D 17 (Nymaatra), Mariette C 1 (Ptahshepses), and the so-far unknown tomb of Ptahwer (D 71) were also explored.

This lecture will offer a newly emerging view of Mariette's cemetery's historical significance and provide an overview of the most pertinent excavation results brought to light by the Czech mission in the last few years.

TRACING THE PAST: THE REVIVAL OF NEFERIRKARA'S PYRAMID

MIROSLAV BÁRTA – MOHAMED MEGAHEH

Czech Institute of Egyptology, Charles University

There are still a few Old Kingdom pyramids whose interior and architectural layouts remain somewhat unknown. Among these, the pyramids of Kings Neferirkare and Nyuserre stand out as particularly enigmatic. Since John Perring's reopening of the pyramid in 1838, followed by Ludwig Borchardt's work at the beginning of the 20th century, King Neferirkare's pyramid has not received the detailed attention it deserves. This oversight has led the mission of the Czech Institute of Egyptology to launch a new project aimed at reopening, restoring, and scientifically documenting the superstructure of the pyramid.

This paper presents the preliminary results of the work conducted by the Czech mission inside King Neferirkare's pyramid. Over the course of two excavation seasons, the team successfully cleaned and restored the descending corridor and reconstructed portions of its collapsed walls. In addition, the mission corrected some of the earlier drawings produced by Borchardt, improving the accuracy of the architectural documentation of the pyramid.

THE SARCOPHAGUS TOMB OF PADINISSET IN SAQQARA
TEXT ARRANGEMENT, SCRIBAL ALTERATIONS AND MISTAKES

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IANES / Department for Egyptology, University of Tübingen

The sarcophagus tomb of Padiniset is located south of Unas' pyramid dating to the end of the 26th Dynasty. The entire burial chamber is decorated with raised reliefs, on which most of the colors are still preserved. The spells for the deceased—mainly Pyramid Texts with few Coffin Texts utterances—were carefully chosen and arranged on the walls in the burial chamber. A few of them occur several times showing their importance for the deceased, whereas others belong to specific groups of utterances, which were laid out on different walls to complete each other. Interestingly, Padiniset's burial chamber shows on the one hand Pyramid Text spells, which are not attested in any other sarcophagus tomb, and on the other, they rely more closely on the Old Kingdom attestations. Furthermore, few of the spells were slightly altered including new phrases or phrasings respectively, which partially also occur in other tombs of the Late Period. The scribal mistakes are another peculiar feature in Padiniset's tomb. Usually, it is assumed that a Hieratic template is used to copy the texts on the walls. However, the scribal errors in Padiniset's text suggest otherwise.

The lecture will give an overview of the arrangement of the different spells in Padiniset's burial chamber, alterations within the occurring utterances, and outline and discuss the various scribal mistakes.

**FACES BEHIND THE NAMES: ANTHROPOLOGICAL COMPARISON OF THE DECEASED IN THE
MAIN AND SUBSIDIARY TOMBS AT ABUSIR AND GIZA**

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The extensive archaeological excavations of the numerous tombs from the Old Kingdom period have significantly enhanced the possibilities of studying the population of the Third Millennium BC as a whole. A substantial corpus of research has already been published on the subject, focusing primarily on specific tombs, their respective owners and the other individuals interred within them. This research provides valuable insights into the health of individuals, their kinship ties, and enables the assignment of a specific "face" to the names and titles recorded in the respective dwellings of eternity. However, a comprehensive study of the characteristics of the entire population of the age of the pyramid builders remains to be undertaken.

The present paper is based on an investigation of collections of human skeletal remains of Old Kingdom individuals buried at Abusir and Giza. The skeletal remains found at Abusir by the Czech archaeological mission are currently stored in Saqqara. The skeletal collection stored in the Natural History Museum in Vienna was acquired through Hermann Junker's research at the Western Cemetery in Giza. The study encompassed human skeletal remains of more than 240 individuals, in various stages of preservation from both osteological collections.

The majority of individuals interred in the vicinity of the pyramids in Central Abusir, the non-royal burial ground at Abusir South, and the Western Cemetery at Giza were members of the socio-political elite of the period. The group included members of the royal family, high-ranking dignitaries, lower officials, and priests, as well as members of their households who were sometimes granted the privilege of building decorated tombs. The distribution of their more or less sumptuous tombs within necropolises

offers insights into the elite social stratification of the period. In broad terms, these tombs can be classified as either main or subsidiary according to their architectural characteristics and burial manner. Subsidiary tombs, which were smaller in scale, were constructed in proximity to the larger (main) tombs. The identity of the owners of the main tombs is largely known, including their names and title.

Even without a preserved title, the status enjoyed by individuals in society can be identified quite precisely from an archaeological point of view (based on the dimensions of the tomb, the material used, the depth of the shaft, the appearance of the cult place, etc.). Can the skeletal remains of these individuals tell us the same? Are there differences in the physiognomy, demographic distribution, or way of life of these individuals?

On initial observation, it may appear that the elite population under study is homogeneous. However, the aim of this research is to address this question and gain a deeper understanding of the Old Kingdom population. The analysis of skeletal remains provides insights that complement those gained from archaeological excavations. The study of the skeletal remains of these individuals significantly complements the findings of archaeological research and shows that there may be many detectable and demonstrable differences between these individuals that can be attributed to their origin or way of life.

**BEYOND THE RIVER: LANDSCAPE CONSIDERATIONS OF WADIS
AS RESOURCE BASES IN THE LATE OLD KINGDOM**

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My studies have investigated the ecological changes that may have occurred at the end of the Old Kingdom because of lower than usual flood levels and uncharacteristic rainfall events. These irregularities would have affected the environmental properties of the river, changing the nutrient balance within the river and thereby, altering the characteristics of the food webs associated within it. During this time marshland resource became more important and desert resources became increasingly represented on tomb wall scenes and as desert animals became more habituated to human contact, became an increasingly important part in offering procession scenes at this time.

The presentation will present a summary of these findings and discuss the potential role of wadis in allowing the exploitation of cattle and desert animal resources. It will present an ecological underpinning of why these phenomena may have developed and, hopefully, expand upon the role that wadi—based resources played in late Old Kingdom society.

INSIDE THE GREAT PYRAMID : UNE NOUVELLE ÉTUDE ARCHITECTURALE ET ÉPIGRAPHIQUE

DES CHAMBRES DE DÉCHARGE

AURORE CIAVATTI

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Les chambres de décharge de la Grande Pyramide de Khoufou constituent un système unique dans l'architecture égyptienne, surmontant la Chambre du Roi. Découvertes en 1837, elles se composent de cinq niveaux de poutres en granite, coiffés d'une voûte à chevrons en calcaire. A l'intérieur de la pyramide, il s'agit du seul aménagement accessible à l'homme où sont observées des inscriptions contemporaines de sa construction : en l'occurrence, des marques d'ouvriers.

Ces installations n'ont été que partiellement publiées depuis leur découverte (Vyse 1840; Perring 1842), et les études architecturales qui ont suivi ont toujours été produites à partir des relevés du XIX^e siècle ou à partir de données incomplètes (Maragioglio, Rinaldi 1965; Dormion 1996). Certaines marques d'ouvriers demeurent inédites à ce jour, qu'il s'agisse de marques de construction (lignes de construction, mesures, indications de pose) sur les blocs en granite, ou de noms d'équipe ou, plus important encore, de dates, inscrites sur les blocs en calcaire.

Afin de palier à la différence entre l'état publié et l'état réel de ces aménagements, Dr Hawass et Dr Ciavatti ont lancé, en 2023, une nouvelle mission d'étude permettant une analyse croisée, architecturale et épigraphique, des chambres de décharge.

Pour ce faire, un scan 3D HD géoréférencé et texturé par une couverture photogrammétrique de précision inframillimétrique a été produit en mars 2024. En septembre 2024, une seconde mission a permis à une équipe de spécialistes de vérifier *in situ* l'ensemble des facsimilés, relevés et plans générés à partir de la modélisation 3D des chambres de décharge.

Une attention particulière a été portée aux vestiges témoignant des méthodes de construction et des techniques d'extraction de la pierre, ainsi qu'aux traces du dommage structurel subi par ces installations au moment de leur construction. Enfin, la découverte de nouvelles marques d'ouvriers apporte un nouvel éclairage sur l'organisation du travail

au sein de ce chantier, mais aussi sur la chronologie de la construction de la Grande pyramide.

FOURFOLD SKY AND THE ROYAL ARCHITECTURE OF THE OLD KINGDOM

ANDRZEJ ĆWIEK

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Already Gaston Maspero in 1894 recognised the meaning of the number four in the architecture, texts and rituals as related to the four cardinal points. The idea of the four parts of the sky is referred to by various motifs in the Coffin Texts and the Book of the Dead: the four winds (CT 162 and CT 355), Thoth cleaving the sky four times and the four gates releasing the four winds (BD 161), the four celestial oars (BD 148). The idea of fourfold sky may be traced in many spells of the Pyramid Texts, e.g.: the four quarters of the sky mentioned *expressis verbis* (Pyr. 1977), invocation to the gods of cardinal directions and the four “clean reedfloats” (Pyr. 464a), four gates of the sky (Pyr. 1252), four winds (Pyr. 497b). It is widely accepted that the four Khufu ships represent the solar boats. They are, however, not destined to go towards the four directions (Goedicke 2000), nor to travel along a N-S axis, in fact representing E-W journey (Altenmüller 2004). At the Great Pyramid the daily travel of the sun is realised by the day-boat (*m^cndt*) and the night-boat (*msktt*) going along the four parts of the sky (the former through the southern and western, the later through the northern and eastern section). Their way imagined as the sequence of going up and coming down represents the idea of *abschüssigen Himmelsbahn* (Westendorf 1966). The idea of fourfold sky appears in the Old Kingdom royal architecture not only with the burials of the sun boats, but also in form of simulacrum of their track itself. Such is the explanation of the peculiar shape of the Dry Moat of Netjerykhet’s mortuary complex, re-appearing in the Fifth Dynasty in the similar shape of the inner corridors of the obeliskoids in Userkaf’s and Niuserra’s sun temples. The role played by the unique Step Pyramid complex is very special since it confirms the importance of the “sun cult” under Netjerykhet, which has sometimes been doubted. The features related to the idea of daily travel of the sun are referred to by some texts (e.g. “the four paths (...) which are in front of the tomb of Horus” in Pyr. 1354a, “a barque of a thousand cubits overall” in CT 162). It seems, moreover, that the rituals conducted in the Third Dynasty influenced much later religious customs and the Dry Moat appeared as *štyt* in the feast of Sokar.

THE MASTABA OF WENI AT SAQQARA: EPIGRAPHIC ASPECTS

PHILIPPE COLLOMBERT

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After excavating the King's and the Queens' funerary complexes of the necropolis of King Pepy I, the *Mission archéologique franco-suisse de Saqqara* has recently redirected its archaeological work on the remains of the mastabas of the élite buried here. The presentation will focus on the new epigraphic evidence after the discovery and excavation of the mastaba of famous Weni, during campaigns 2022 and 2024.

THE HU–MFA EXPEDITION AND SAQQARA

PETER DER MANUELIAN

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Archaeologist George Reisner (1867–1942) is best known for his excavations at the Giza Necropolis, and in Sudan. While neither his Hearst Expedition (1899–1904) nor his Harvard University–Boston Museum of Fine Arts Expedition (1905–1947) ever worked formally at Saqqara, there was nevertheless substantial contact and even overlap between that site and Reisner's operations at Giza. This paper explores Reisner's connections, direct and indirect, with Saqqara. He enjoyed close friendships with both James Quibell and Cecil Firth; he considered the Step Pyramid excavations among the most significant in all of Egyptian archaeology; he acquired numerous Saqqara objects (through the Antiquities Service) for the Museum of Fine Arts, Boston; and he sent both Egyptians and Western archaeologists out from Giza to work at the site. Some of his Qufti (fore)men even found lasting employment at Saqqara both before and after Reisner's death, cementing a legacy and impact that is little-known in Egyptology today.

**ROYAL STATUARY OF THE FOURTH DYNASTY:
THE PYRAMID COMPLEXES OF KHUFU AND KHAFRA**

LAUREL FLENTYE

The Eastern and G I S Cemeteries at Giza Project

This paper will address the statuary programs of the pyramid complexes of Khufu and Khafra of the Fourth Dynasty at the Giza Necropolis. It will be an in-depth follow-up to the paper presented at Abusir and Saqqara in the Year 2015. Although Khufu's statuary is mostly missing, an analysis of the statuary programs of Snefru and Djedefra may reveal important information on the types of statues that potentially were in Khufu's pyramid complex as well as its overall programmatic layout. How the juxtaposition of statuary to relief decoration evolved over time from Snefru to Khufu must be factored into a discussion of the layout of Khufu's decorative program, i.e., how was statuary placed near or against relief decoration. A discussion of scale and dimensions is also relevant to a reconstruction of Khufu's pyramid temple. References to elite tomb statuary may also provide insight into the different statue types and design issues prevalent during Khufu's reign. Additionally, what materials were present during the construction and decoration of Khufu's pyramid complex and surrounding tombs can provide possible sources for his statuary program.

The statuary program of Khafra in the pyramid and valley temples has more evidence for actual statue types and layout. Reconstructions of the pyramid temple show standing colossal statues in Osiride form (Uvo Hölscher's reconstruction) or seated statues with inscribed architraves above (Herbert Ricke's reconstruction) in the court. Additional statues may have been placed on the sides of the halls and court. Auguste Mariette's discovery in 1860 of the cache in the valley temple (Borchardt CG 9-17 and 378) with primarily seated statues of Khafra in addition to other fragments can be related to the series of 23 niches in this temple. Iconographical elements, such as the lotus and papyrus in the *Sematawy* design on the bases in differing positions, as well as the names of the king suggest a formulaic layout that can be related to directional orientation. This paper will attempt to reconstruct the positions of the statues in relation to north and south

based on the *Sematawy* design. The reconstruction will also include the evidence from Hölscher's excavations. How the placement of statues affected the reading of their inscriptions is also a factor in the layout of the statuary program.

Thus, through a study and analysis of the royal pyramid complexes of Khufu and Khafra, it may be possible to recreate their statuary programs utilizing the evidence from Snefru's and Djedefra's pyramid complexes, the discovery of statues in Khafra's valley temple, as well as elite tomb statuary programs that presumably reflect, in some respect, the corpus of statue types available during the early to mid-Fourth Dynasty.

THE BOOK OF THE DEAD IN LATE PERIOD TOMBS IN THEBES AND SAQQĀRA/ABUṢĪR

LOUISE GESTERMANN

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The origin of the Book of the Dead and its development and history are largely traceable. Its derivation from the Pyramid Texts and above all the Coffin Texts, as well as the creation of new spells, are known, as is the redaction in the Second Intermediate Period in Thebes. The earliest appearance of the Book of the Dead during the New Kingdom was in the royal environment in Thebes, before it became widespread for private burials, most of which were also in Thebes. With such burials, papyri at the burial sites are the main writing medium.

After a temporary interruption the Book of the Dead reappeared in the Late Period and was used intensively in the large temple tombs in Thebes. The earliest occurrence of spells from the Book of the Dead is associated with the tomb of the Kushite Karakhamun, which was built in the southern Asāsīf north of the Ramesseum (TT 223). Some of the later tombs in the northern Asāsīf at Dair al-baḥrī, including the tombs of Harwa (TT 37), Montuemhat (TT 34) and Petamenope (TT 33), retain the tradition of decorating pillars with spells from the Book of the Dead. They sometimes switch to the order of the spells known from the Saite Recension.

Spells from the Book of the Dead are also attested in Late Period tombs in the north of the country, including burials in Saqqāra and Abuṣīr. Of these tombs, that of Bakenrenef in Saqqāra is architecturally very similar to the ones in the south – and there are also numerous overlaps with the temple tombs in Thebes in terms of the use of the Book of the Dead. The situation is different with the shaft tombs constructed in Saqqāra and Abuṣīr during the 26th and early 27th Dynasties. The Persian tombs south of the pyramid of Unas in Saqqāra and the shaft tomb of Menekhibnekau in Abuṣīr are examples of this. The differences in repertoire and the possible relationships between the two groups will be presented in more detail.

THE LESSER VAULTS OF THE SERAPEUM OF MEMPHIS AT SAQQARA: RESUMING THE EXCAVATIONS AND STUDY

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In 2020, the Musée du Louvre took over an excavation in the major site of the Saqqara Serapeum, the necropolis of the Apis bulls. Here, the Franco-Egyptian mission, involving the University of Lille, is studying the area of the Lesser Vaults, discovered by Auguste Mariette in the mid-19th century and then partially excavated again by Mohammed Ibrahim Aly in the 1980s.

An important rockslide in the middle of the Lesser Vaults main gallery is still blocking access to most of the gallery, and one of the challenges of this project is the geotechnical and geophysical study that should enable us to remove it and consolidate the underground that threatens to collapse. In the meantime, the outside excavation and survey campaigns carried out in recent years have brought to light a number of ancient features on the site.

Given the current state of our knowledge since Mariette's excavations, the three areas of the sacred bull necropolis can be divided chronologically as follows: the oldest part corresponds to the isolated tombs (from the reign of Amenhotep III to those of Ramses II); then the Lesser Vaults have been in use from Ramses II to Psammetik I; and finally the Greater Vaults from Psammetik I to the end of the Ptolemaic period. These developments are closely linked to the complex and evolving history of the Serapeum and the layout of the Lesser Vaults in relation to the other areas needs to be studied in order to better understand the sequence of construction phases, in particular the successive developments of the access path to the Lesser Vaults as the neighboring Greater Vaults evolved.

This initial work has also uncovered a number of artefacts, including inscribed stelae, which confirm some current prosopographic studies on the topic. This paper will present

the challenges of this new excavation on an important historical site and the possibilities opened up by the first campaigns.

CONTRIBUTION À L'ÉTUDE DES TITRES ET DES FONCTIONS DES FILS ROYAUX DE LA V^E DYNASTIE

MALLAURY GUIGNER

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L'éviction progressive des fils royaux de l'administration et du pouvoir au cours de la V^e dynastie, notamment due à la complexification de l'appareil étatique et de son organisation, est connue des chercheurs travaillant sur l'Ancien Empire. C'est dans un contexte de multiples transformations politiques, religieuses et sociales qu'apparaissent de nouveaux acteurs dont l'origine familiale reste inconnue. Ces nouveaux acteurs prennent les titres, fonctions et positions sociales des fils royaux qui jusqu'ici étaient presque les seuls à gérer le pays. M. Baud l'a d'ailleurs parfaitement démontré dans son ouvrage sur le pouvoir et la famille royale. Les titulatures des membres de l'administration de la V^e dynastie confirment la place prédominante que ces nouvelles élites prennent au sein de l'organisation étatique en raison de leur position proche du pouvoir, parfois en tant que conseiller du roi.

Mais une question demeure : que deviennent les fils royaux une fois qu'ils ont été évincés du pouvoir ? Quelle est leur place dans cette société en mutations perpétuelles ? M. Baud, et B. Schmitz avant lui, ont brièvement évoqué le rôle que ces individus ont pu tenir au sein de la V^e dynastie, mais aucune étude de leur titulature et de leur relation familiale n'a été entreprise. Les fils royaux de cette période ont encore des titres et des fonctions mais lesquels ? Dans quel domaine ? Changent-ils selon les règnes et leurs mutations politiques ? La différence entre les fils royaux de sang et ceux qui le sont devenus par mariage avec l'une des filles royales est-elle significative ? L'analyse de leur fonction, de leur sépulture ou encore de leurs relations familiales est à prendre en

compte pour cerner les fils royaux de sang sous la V^e dynastie. L'étude montrera-t-elle une interaction entre fils royaux de sang et ceux qui ont obtenu ce statut ?

L'apport des publications tchèques notamment permettra de collecter de nouvelles données depuis la publication de M. Baud. Il s'agira alors de s'intéresser aux titulatures des fils royaux de l'ensemble de la V^e dynastie, étudiés selon un découpage chronologique, afin de discerner quelles sont leurs fonctions administratives et rituelles en contexte memphite, mais aussi de définir quelle est leur place à la cour du roi, maintenant qu'ils ont été évincés du pouvoir central. Des études de cas seront menées sur certaines tombes découvertes sur les sites des nécropoles memphites d'Abousir et de Saqqâra mais aussi de Gîza.

**OLD KINGDOM INSCRIPTIONS FROM THE TETI PYRAMID CEMETERY IN THE GUNN MSS,
GRIFFITH INSTITUTE, UNIVERSITY OF OXFORD**

JULIA HAMILTON

Macquarie University, Sydney

Battiscombe Gunn worked as an epigrapher alongside Cecil Firth at Saqqara during the Service des antiquités de l'Égypte excavations of the Teti Pyramid Cemetery between 1920–1922. Although Gunn did not have a special interest in ‘non-textual’ additions to monuments, his notes on scratched, etched, and painted inscriptions across the Saqqara plateau, including in the Teti Pyramid Cemetery are now invaluable. Even in the most recent publications of tombs in the Teti Pyramid Cemetery, the semi-cursive and sometimes fully hieratic additions and figural images, even possible architectural sketches, have rarely been photographed and frequently escape discussion or mention. Compared to the cemeteries at Abusir and South Saqqara, examples of mason’s marks are also poorly attested from the Teti Pyramid Cemetery and yet examples occur among Gunn’s archive, now held by the Griffith Institute, University of Oxford. This paper will present examples of these inscriptions, re-contextualising them where possible alongside other published examples, and discuss the value of further archival research to complement future field research in Saqqara.

**THE MASTABA OF WENI AT SAQQARA:
ARCHAEOLOGICAL ASPECTS AND IMPLICATION IN THE ELITES' NECROPOLIS OF KING PEPY I**

XAVIER HÉNAFF

Mission archéologique franco-suisse de Saqqara

After excavating the King's and the Queens' funerary complexes of the necropolis of King Pepy I, the *Mission archéologique franco-suisse de Saqqara* has recently redirected its archaeological work on the remains of the mastabas of the élite buried here. The presentation will focus on the new discoveries in the elites' necropolis: campaigns 2022 and 2024.

**A LATE PERIOD HOUSE ON AN OLD KINGDOM MASTABA
REVISITING MARIETTE'S CEMETERY AT NORTH SAQQARA**

LUCIE JIRÁSKOVÁ – FILIP COPPENS – MARIE PETERKOVÁ HLOCHOVÁ – MIROSLAV BÁRTA

Czech Institute of Egyptology, Charles University

Under the supervision of Auguste Mariette a number of Old Kingdom mastabas were uncovered in the area to the north of the pyramid of Djoser. Their fast excavation and limited documentation, which was provided in the subsequent publication, encouraged the archaeological team of the Czech Institute of Egyptology to visit the cemetery again. When uncovering a large stone mastaba situated to the east of the tomb of Ti, walls of another construction appeared on the top of the Old Kingdom masonry. Although largely damaged, the architecture revealed a part of an ancient house, which was probably built there in the Late Period, in the time when the North Saqqara desert was perceived as a land of sacred animals and their cults. The paper will present remains of this structure and its possible interpretation.

THE MENKAURE VALLEY TEMPLE. A 5TH DYNASTY TEMPLE AT GIZA

DAN JONES

Ancient Egypt Research Associates (AERA)

Our principle understanding of the layout and history of Menkaure's Valley Temple (MVT) at Giza is the 1931 publication by American archaeologist George Reisner, following his excavation of the temple between 1908 and 1910. Reisner concluded that the MVT had two major building phases. He believed that Menkaure's successor Shepseskaf had completed a "First Temple" upon a platform of huge limestone blocks that Menkaure's builders left incomplete (MVT-0). During the life of the First Temple, people built modular apartments, storage bins, and silos in the central court. A powerful flash flood cut through the MVT west offering hall and portico and flooded the court, causing people to abandon the temple. People returned to build Reisner's "Second Temple" late in the 6th Dynasty, probably during the reign of Pepy II. Reisner's plan of the First Temple became the template for books and articles about the pyramid of Menkaure. Twenty years after Reisner's work, Selim Hassan excavated the terrace along the MVT east front, with a four-column vestibule that matches the vestibule inside the entrance to the MVT proper, and understood this "Ante-temple" as the valley temple of Khentkawes I, whose monument and town form a tight spatial bond with the MVT.

Over eight field seasons in the MVT Ancient Egypt Research Associates (AERA) recleaned and surveyed the Ante-temple, and the eastern and western thirds of the MVT, and found that much of Reisner's basic "First Temple" plan belongs to what we call the "Middle Temple" (MVT-2) most probably built during the first half of the 5th Dynasty. It was the Middle Temple that the major flood event ruined and brought an end to life in the court apartments. We find walls of the First Temple (MVT-1), most probably built by Shepseskaf, cut so low – by earlier desert flooding? – that its layout remains obscure. Reisner's "Second Temple" becomes our "Third Temple" (MVT-3), with people's apartments and storage bins built upon the buried ruins of the Middle Temple (MVT-2) occupation.

The famous dyad statue of Menkaure and his queen-mother was found not in a pit cut by "Arab treasure hunters", but in an older pit cut into temple foundations around the

abandonment of the Middle Temple (MVT-2). AERA's research in both the MVT and the connected Khentkawes I Town (KKT) show that both were built in mudbrick probably at the same time. The famous triad statues were left upon the floor of Corridor 4 at that time, and buried by debris from the collapse of the Middle Temple, and then by the occupation of the Third Temple (MVT-3)

We have seen very little of Reisner's "First Temple," completed by Shepseskaf at the end of the 4th Dynasty, and it is essentially unknown to us. The MVT and most of the settlement within the central court that survived is essentially an extensive rebuild of the temple in the 5th Dynasty.

**RE-EXCAVATING THE TOMB OF SABU KEM IN NORTH SAQQARA:
CONTINUITY AND CHANGE IN THE CEMETERY OF THE HIGH PRIESTS OF PTAH**

IRENA KALFAS BENEŠOVÁ

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During his excavations in 1858–1860 in North Saqqara, Auguste Mariette examined a vast cemetery of mastabas located north of the pyramid complex of Djoser (Netjerikhet) and near Wadi Abusiri, primarily dating to the Fifth and Sixth Dynasties. This cemetery includes the final resting place of a group of High Priests of Memphis. Mariette's observations and drawings were later published in his 1889 work *Les Mastabas de l'ancien empire, Fragment du dernier ouvrage*. Recent re-excavations conducted by the Czech Institute of Egyptology during the 2022–2023 seasons have provided new and important insights into this cemetery.

In the shadow of the two great neighboring mastabas of Ptahshepses and Sabu, the mastaba of Sabu Kem has often been regarded as an insignificant structure. However, recent examinations have revealed information and unique aspects of this tomb, challenging this perception. New findings, including the precise location of the tomb within the layout of neighboring structures—previously depicted vaguely on earlier plans—demonstrate the continuous development of the cemetery over time. These findings also suggest ongoing burial traditions among individuals of the same social class, as well as possible family ties. The tomb's architectural features, particularly the serdab and substructure, indicate an innovative approach during its construction. Moreover, several of Sabu Kem's titles were omitted in Mariette's publication. When placed in the broader context of other individuals holding the title *wr xrp Hm.wt* ("Greatest of the Directors of Craftsmen"), these omissions highlight a previously not so clear continuity in the titles, and adding a title attested only for one other High Priest of Ptah. Although the tomb was looted in antiquity, it still yielded many artifacts, including a fragmentary statue, which suggests the richness of the original burial equipment and the high status of the tomb's owner. These discoveries provide a better understanding

of the development of this part of the cemetery, as well as the burial preferences of this closely connected group of individuals.

UNDERSTANDING THE DEVELOPMENT OF FUNERARY LANDSCAPE AT NORTH SAQQARA

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The Japanese-Egyptian mission from Kanazawa University, Japan, and the Ministry of Tourism and Antiquities to North Saqqara has excavated at the eastern escarpment of North Saqqara since 2017. The site is located between the old Saqqara Inspectorate and the old British House as well as the east of the Early Dynastic mastaba 3507. Recent excavations in 2019, 2023, and 2024 have revealed several tombs dating from the Early Dynastic Period to the early Old Kingdom (The Second to the Third Dynasty), the Eighteenth Dynasty in the New Kingdom, the Late Period, and the Graeco-Roman Period, including a catacomb. Therefore, the eastern escarpment had been utilised as a cemetery for approximately 3,000 years. The mission's primary goal is to understand the development of the funerary landscape at North Saqqara for millennia.

First, some mudbrick walls probably belonging to the Second to the Third mastaba on the edge of the North Saqqara plateau were discovered, where Walter Bryan Emery had never excavated. In this area, we excavated a shaft and subterranean chamber, which revealed some artifacts dating to the Third Dynasty. A rock-cut tomb dating from the Second Dynasty to the early Third Dynasty hewn on the limestone cliff to the east was uncovered. Together with a mudbrick mastaba tomb to the north of the northern wall of the catacomb, these new finds suggest that the extent of the Early Dynastic and early Old Kingdom cemetery at North Saqqara seems to have been larger than initially thought, and it was not only for the elite tombs but also for the tombs of lower status. The discovery of the early Eighteenth th Dynasty tombs also suggests evidence of the formation of the Saqqara Necropolis at the beginning of the New Kingdom. It has been suggested that the Teti Pyramid North cemetery was the earliest New Kingdom cemetery, and it was because there was the cult of King Teti from the 18th Dynasty.

However, the Teti Pyramid is invisible from this excavation site, and it can be assumed that the New Kingdom cemetery had developed from the eastern escarpment and extended to the west as a large New Kingdom cemetery of 10 ha to the west has been identified by the present author. From the Late Period onwards, this area was actively utilized as a cemetery, and continued to be used throughout the Graeco-Roman Period. Future investigations of the eastern escarpment at North Saqqara will shed more light on the development of the funerary landscape at North Saqqara for millennia.

WOMEN'S MOVEMENT: ACTIVE CHANGES IN FIP ICONOGRAPHIC FEATURES

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From the Fifth Dynasty, women's service increased exponentially in line with the escalation of non-royal male positions in the state and private sectors (Kelly, 2024).¹ Although the number of female titles and their holders increased, there appeared to be minimal change in how women were depicted in tomb scenes, false doors, and stelae. Throughout the Old Kingdom, women were generally portrayed as secondary and passive figures, in a "universal gendered distinction" between the dichotomies of active males and passive females (Betbeze 2022, 108).² However, this began to change late in this period. Several women began to be depicted adopting traditional male attributes and poses. For example, Ankhenespepy II—one of the most influential Old Kingdom women—was depicted in this active male pose in the typical pulling of the papyrus motif

¹ KELLY, S. 2024. *Unveiling Female Social Power in Early Egypt (c. 3080-2180 BC)*. Archaeology of Egypt and Sudan Series, Vol. 1. Oxford: BAR Publishing,

² BETBEZE, R. 2022 *Ostentation in Old Kingdom Female Tombs: Between Iconographical Conventions and Gendered Adaptations*. In *Women in ancient Egypt: revisiting power, agency, and autonomy*, edited by M. Ayad, pp. 187–203. Cairo: The American University in Cairo Press.

in her mortuary complex (see Leclant and Minault-Gout 2000, Pl. XVII).³ Her stance is in contrast to, for example, Fourth Dynasty Hetepheres II and Meresankh III in a similar scene (see Dunham & Simpson 1974).⁴ Similarly, an anonymous woman in Mereruka's tomb is shown in an active stance when overseeing the slaughter of a bull in a funerary ritual (Kinney 2012: 257, Fig. 4).⁵ This active pose is one of several changes detected in the iconography of women (Daoud 2005),⁶ in the First Intermediate Period (FIP)–Dynasties 7-11, 2160-2055 BC (Pitkin 2023, xx).⁷

The FIP is now recognized as a time of increasing prosperity for the non-elites, greater cultural complexity that demonstrates continuity and creative responses to change, with advanced displays of selfhood for all population segments. This paper is part of a larger project that considers FIP women and their social power, a comprehensive study that delves into the roles and influence of women during this transformative period.⁸ This paper focuses on one aspect, that of the changes in non-royal women's iconography, as seen on their false doors and stelae from the Memphite necropoli in the FIP. The evidence of female active poses, posture of invocation, posture of adoration, staves, smelling an unguent jar, and holding symbols like the ankh, will be examined to evaluate if this iconography is representative of the changes in women's agencies in the Heracleopolitan period.

³ LECLANT, J. & MINAULT-GOUT, A. 2000. Fouilles et travaux en Égypte et au Soudan, 1998-1999. *Orientalia*, 69(3), pp.209-329.

⁴ SIMPSON, W.K. & DUNHAM, D. 1974. *Giza Mastabas. 1, the Mastaba of Queen Mersyankh III G7530–7540*. Boston: Department of Egyptian and Ancient Near Eastern Art, Museum of Fine Arts.

⁵ KINNEY, L.J. 2012. Butcher Queens of the Fourth and Fifth Dynasties: Their Association with the Acacia House and the role of butchers as ritual performers. In *Ancient Memphis 'Enduring is the Perfection': Proceedings of the International Conference held at Macquarie University*, edited by L. Evans, pp. 253–266. Uitgeverij Peeters en Departement Oosterse Studies.

⁶ DAOUD, K.A. 2005. *Corpus of Inscriptions of the Herakleopolitan Period from the Memphite Necropolis: Translation, commentary and analyses*. BAR International Series 1459. Oxford: BAR Publishing.

⁷ PITKIN, M. *Egypt in the First Intermediate Period: the history and chronology of its false doors and stelae*. London: Golden House Publications, 2023.

⁸ The Impact of Political and Climate Change on Women's Agency: A Social Power Analysis, IPOCCWWA - Grant No 101148700.

**ALL THAT REMAINS: BIOARCHAEOLOGICAL INVESTIGATION OF THE IMPACT OF CLIMATE
AND ENVIRONMENTAL CHANGES ON THE ANCIENT POPULATION AT SAQQARA**

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Over three decades of archaeological excavations immediately to the west of the Step Pyramid funerary complex, conducted by the Polish-Egyptian Archaeological Mission, University of Warsaw, have yielded rich evidence of funerary activity dating to the late Old Kingdom (5th-6th Dynasties)/First Intermediate Period and Graeco-Roman Period. Coincidentally, these were the times that witnessed major political, social, and climatic and environmental changes that impacted the local population. Building on the funerary evidence and supported by the existing research into the impact of climate variability on ancient state formation and collapse, we have applied a bioarchaeological approach to investigate the life and death at Saqqara, with the focus on human, botanical and textile remains.

This presentation will focus on selected aspects of the ongoing research, which aims to investigate a link between (1) temporal climate variability and environmental changes, (2) political instability, and (3) social diversity and physical health of the ancient Memphite population at Saqqara, using funerary evidence from two temporally-distant cemeteries

THE SUN'S JOURNEY THROUGH THE NIGHT
FROM THE SHAFT TOMBS OF MENEKHIBNEKAU AND DJEHUTYEMHAT AT ABUSIR

RENATA LANDGRÁFOVÁ – FILIP COPPENS – JIŘÍ JANÁK

Czech Institute of Egyptology, Charles University

The ceiling of the burial chambers of the neighbouring Late Period shaft tombs of Menekhibnekau and Djehutemhat at Abusir are decorated with two variants of the nocturnal journey of the sun. Both feature twelve barques bearing the sun god (often labelled as *knm.tj* in the more elaborate and fully completed version of Menekhibnekau) and a varying number of members of his crew. While the individual barques share some features with those known from other representations of the night journey of the sun, as a whole they are unparalleled and, moreover, they differ rather strongly from each other in the last six hours. This makes their interpretation non-trivial, and the search for possible sources and parallel important. At the same time, these unique scenes provide an important contribution to our understanding of the concepts behind the representations of the nocturnal journey of the sun in general.

LE DOSSIER DE PÉPY-HOR-KHENET DANS LE COMPLEXE DE PÉPY IER AU MOYEN-EMPIRE

RÉMI LEGROS

Mission Archéologique Franco-suisse de Saqqâra / Laboratoire HiSoMA (UMR 5189)

Cette communication propose l'édition d'un dossier familial du Moyen Empire composé d'une statue et d'une table d'offrandes. Mis en parallèle avec les objets contemporains retrouvés dans le même secteur, ces deux objets permettent d'évoquer la reprise du culte royal sous la XIIe dynastie.

CRANES IN OLD KINGDOM ART AT ABUSIR AND SAQQARA

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While Egyptians trapped and kept poultry, particularly ducks, geese and pigeons for consumption, some of the highest officials also feature cranes in the decoration in their tombs. Cranes are large, long legged, migratory birds which cross Egypt on the way to Sudan and Ethiopia. The depictions of cranes in Old Kingdom tomb chapels from the Memphite region informs us about the handling of these majestic birds, which may have been kept by the elite as a status symbol or for entertainment to observe their displays of dancing, flapping and jumping, or more rarely as an elitist delectability. This paper examines the different types of cranes, the scenes in which they appear and role that cranes played in the estates of the elite and the way in which they were managed and utilised.

The ancient Egyptian artists were familiar with the different types of cranes and distinguished them by name as well as in the way they were depicted. A scene in the chapel of Ptahshepses at Abusir where the colour remains, assists in the identification of different types of cranes, the Demoiselle crane (*Anthropoides Virgo*), called *wḏ*, the Common crane (*Grus grus*), called *ḏt*, and the juvenile Common crane, called *ḏt* *ḥw*. There are also a small number of instances where cranes are referred to as *g*, these may possibly be Sandhill cranes (*Grus canadensis*).

Two high ranking officials at Saqqara show rare scenes of cranes. In the chapel of Mehu cranes are shown being captured in a hexagonal net which has been adapted to compensate for their size. While in the chapel of Ty, a flock of cranes are transported by boat from estates in the south.

Although wild cranes are known to be quite aggressive, attacking with their beaks and feet, they appear to become quite tame when they are kept in captivity, and are occasionally shown as pets. Captured cranes are shown being kept in poultry yards, usually outside the aviaries where ducks and geese are kept. They were fed grain but in a small number of instances they are shown being hand fed bread and the possibility that this was to fatten them for consumption will be explored. Cranes are sometimes

shown in processions of birds and the way in which the flock is depicted changes over time, being a dating criterion. Cranes are sometimes shown being carried by offering bearers, tucked under one arm while they hold their beak with the other hand. Less frequently they are shown amongst the offerings for consumption, typically in the tombs of very high officials.

APPLICATION OF VIRTUAL ANTHROPOLOGY TO THE STUDY OF SKULL MORPHOLOGY OF INDIVIDUALS FROM THE OLD KINGDOM

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Skeletal remains of individuals from the Old Kingdom period have long been of interest to numerous scientific disciplines including anthropology. In comparison to conventional techniques, virtual anthropology offers a non-invasive and non-destructive approach to data capture, which can then be analyzed in 3D or 2D environments using advanced statistical and imaging methods. As a result, new information and perspectives are frequently obtained, particularly when examining skeletal morphology and its differences between individuals and populations. The objective of this paper is to present the findings of recent research focused on 3D analyses of skull morphology of individuals from Abusir and Giza sites, which are dated to the Old Kingdom period. The analyses and results imaging were aimed at studying sexual dimorphism, inter- and intra-population variability, and the influence of kinship on variability.

3D models of skulls of individuals from Abusir were obtained through the use of a 3D scanner HD 3D Structured Light Scanner Pro S3 directly in Egypt. The skeletal remains from Giza are stored in the Natural History Museum in Vienna and the 3D models were acquired by the same machine. As a comparative sample, 3D models based on CT scans

from contemporary Egypt population were used. Before analyses, all 3D models were assembled, decimated, endocranium was erased and landmarks were placed on them directly in Morphome3cs software, that was also used for all analyses and visualizations. Visualizations of the differences in skull morphology were achieved by mapping the shell distances between the mean model of the first group and the mean model of the second group surfaces using color maps. This approach enabled the investigation of differences between sexes, populations and related/unrelated individuals were studied, while principal component analysis (PCA) was employed to assess variability. Differences between historical and contemporary samples reflect the long-term evolution of the skull over time. However, significant differences in sexual dimorphism between the Old Kingdom sample and contemporary Egypt were identified, prompting a shift in focus towards an in-depth examination of the Old Kingdom sample from the perspective of kinship. This approach allows for a more nuanced understanding of the observed differences and the potential factors contributing to them, including the presentation of familial relationships within the sample. Egyptologists' knowledge of sample was used to analyze and connect individuals with their familial relationships, based on archaeological and written sources. Variability was visualized using PCA and a scatter plot. The connected individuals and presented distances between them in a graph together with the information provided by the Egyptologists may facilitate a more comprehensive understanding of the relationships. This hypothesis is corroborated by research conducted on meticulously genealogically documented sample. Studied documented dataset included 3D models of individuals of Czech origin dated from 19th to 20th century, that represents adult members of several branches of one family over 5 generations. The distribution of these individuals and distances between them in the scatter plot accurately reflects the familial relationships presented in the family tree provided by the owner of this collection.

SAQQARA'S HIDDEN TOPOGRAPHY:

UNPUBLISHED ARCHIVAL MAPS AND THE ARCHAEOLOGY OF THE SERAPEUM'S ENCLOSURE

FILIPPO MI

University of Strasbourg

This study presents a significant contribution to our understanding of the archaeology and topography of Saqqara during the first millennium BCE, drawing upon previously unpublished archival materials from France. Of particular importance is a map (musée du Louvre, MS 178) produced by Théodule Devéria, who accompanied Auguste Mariette during his excavation campaigns in the 1850s. This map, which has remained unpublished until now, offers a novel depiction of the Serapeum enclosure and its surroundings, revealing details previously unknown to the scholarly community. Handwritten annotations on the map, here translated and discussed for the first time, provide crucial insights into Mariette's discoveries, indicating that his findings were more extensive than those he chose to publish. Notably, some of these discoveries predate conclusions made by other archaeologists over a century later. The map and its annotations challenge established views on the Serapeum and its temenos. The study proposes a new dating of the temenos, departing from traditional interpretations, and offers an alternative reconstruction of its layout. Based on a thorough exegesis of Mariette's post-mortem excavation reports, complemented by comparisons with contemporary archaeological parallels from other Egyptian sites, the study demonstrates that the temenos did not resemble the widely accepted depictions. Rather, it appears to have been part of a rare architectural tradition, potentially originating in Saqqara, though not entirely unique in the broader context of Egypt's sacred landscapes. In addition to Devéria's map, the study examines an unpublished drawing held in the Bibliothèque Nationale de France (NAF 20.175), which depicts an archaeological plan of what appears to be the Sphinx Alley at Saqqara. This document further enhances our understanding of the Memphite necropolis during this period, providing new evidence for the arrangement and significance of key monuments. By introducing these previously unpublished documents and critically analysing their

content, this study broadens our understanding of Saqqara's archaeological landscape. It invites a reconsideration of how the Serapeum and its environs were documented in the mid-19th century, shedding light on overlooked aspects of Mariette's work. While these findings offer fresh perspectives on the evolution of Egyptological scholarship, they also highlight the value of archival materials in refining and re-evaluating long-standing interpretations of Saqqara.

MISCELLANEA GRAFFITICA II: A DEVELOPING CORPUS OF SECONDARY EPIGRAPHY FROM THE SOUTH TEMPLE OF SENWOSRET III AT DAHSHUR

HANA NAVRATILOVA

University of Oxford / The Metropolitan Museum of Art Egyptian Expedition

Senwosret III opted to add a large temple building to the south of his pyramid at Dahshur. The South Temple was added to the area south of an original outer enclosure wall. It was then surrounded by a later outer enclosure wall. It is connected via a passageway to the inner pyramid court. The area of the South Temple has yielded a large volume of secondary epigraphy, texts and figures, placed on different surfaces coming from diverse parts of this building, and dated to the New Kingdom. The finds from the area included numerous relief fragments and significant architectural elements and statue fragments. The South Temple was the first large structure within the pyramid precinct that a visitor would have encountered after emerging from the causeway. Its area might have been also accessible from the south side of the precinct, which could have been relevant for visitors approaching from that direction.

This contribution focuses on the new graffiti finds from seasons 2014 to 2018, and from 2021 onwards (a preliminary survey of the 1990s finds was published in 2013). It offers a survey of the material in context of archaeology of re-use and deconstruction of this pyramid complex. Most hitherto excavated areas of the temple contributed fragments with secondary epigraphy, and the research is ongoing. The currently observed distribution pattern has implications for our understanding of the circulation of the visitors, albeit with caveats. Although the dipinti and graffiti were found on varied surfaces, some categories are conspicuous: the architectural elements of the temple – the columns and the doorframe(s), specifically door thicknesses. Another significant group is constituted by dado fragments, mostly with yellow and black polychromy and with incised or carved traces of texts or, more often, figures. Among graffiti highlights, we find figural dipinti, and also varied text fragments, including Kemyt-like fragments. Some of these texts were added to fragments of limestone once the structure was

already destroyed. These figures and texts imply that a specialized workforce was active on the site.

The South Temple graffiti and dipinti group is particularly important as it concerns a large structure and also most likely one of the main access points to the rest of the pyramid precinct. It also provides evidence to both major chapters of the New Kingdom history of the temple: the 18th dynasty cult and memory site and the Ramesside procurement operation.

NON-ELITE POPULATION OF SOUTH SAQQARA: DISCUSSION ON SELECTED OBJECTS FROM THE SECONDARY CEMETERY OF KHUWY'S TOMB

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Khuwy's tomb at South Saqqara, excavated in the recent years by the Djedkare Project archaeological mission is surrounded by a secondary cemetery. This material shows continuity in the tradition of people choosing the vicinity of royal and other important elite tombs for their own burial. Just like the royal pyramids of the Old Kingdom attracted elite tombs, both pyramids and said elite tombs later attracted the non-elite population of the area to create their own cemeteries close to those structures. The secondary cemetery around Khuwy's tomb represents a part of a much larger secondary cemetery, which up until now includes graves excavated around the pyramids of the king and queen themselves, as well as around the neighbouring tomb of Isesiankh. This paper will focus on the material from the area of Khuwy's tomb, more specifically on the objects of burial assemblage found within this cemetery. The cemetery yielded numerous finds from both burial context and outside it. These predominantly date to the New Kingdom or later and give insight into the non-elite population of that area in those time periods. It will further put a small focus on a few chosen objects from the corpus for their peculiar nature.

**THE SIGSAQQÂRA PROJECT'S BIG DATA:
REFLECTION ON THE MANAGEMENT OF THE DATA AND METADATA**

ÉLOÏSE NOC

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The SIGSaqqâra Project was launched in 2016 and supported by the LabEx ArcHiMedE for 3 years. The aim of the project is to better understand the Saqqara necropolis from the Predynastic Period to the end of the Old Kingdom. Data from published surveys, excavations, research can be complex to explore without tools. For the SIGSaqqâra project, it has been decided to collect, gather and organised the data in digital tools: a database and a geographical information system (GIS). At the light of the research developed around the data since the beginning of the project, the science opens new perspectives to manage big data. A big data is often qualified according to 3 "V" principles: Volume, Variety and Velocity but also other words (Veracity, Value, Variability...) and the research data has a lifecycle organised into 6 stages: planning research, collecting data, processing and analysing data, publishing and sharing data, preserving data and re-using data.

The paper proposes to examine the life cycle of the SIGSaqqâra Project's big data to extract what needs to be improved to upgrade the quality of the data and therefore enhance the precision of the analysis and by consequence the information about the necropolis of Saqqara from the Predynastic Period to the end of the Old Kingdom. Indeed, to enable data to have as complete a cycle as possible, and to process it with the utmost scientific rigor using an appropriate methodology in order to produce research that gives results, in addition to the data and metadata to manage, there are principles to respect, concepts to grasp, tools to create, media to mobilize, protocols to define and documentation to draft. In the poster, the concepts of heterogeneity and data quality will be discussed. FAIR (Findable, Accessible, Interoperable, Reusable) and CARE (Collective Benefit, Authority to control, Responsibility, Ethics) principles will be introduced, digital concepts like the PID (Persistent Identifier) and the DOI (Digital Object

Identifier) will be considered, tools like ontologies, thesauri and vocabulary lists will be examined and documentation like the DMP (Data Management Plan) will be explored.

THE SARCOPHAGUS OF KING DJEDKARE-ISESI IN THE CONTEXT OF OTHER OLD KINGDOM ROYAL SARCOPHAGI

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Beginning with Netjerikhet, the rulers of the Old Kingdom built pyramids as their abodes of eternity, with their bodies deposited in stone sarcophagi. We first encounter this innovation with the sovereigns and their family members; later from the Fourth Dynasty onwards, non-royal persons were also allowed to be buried in stone containers. Unlike the sarcophagi of high state dignitaries, royal sarcophagi were with one exception undecorated and did not bear any texts until the late Old Kingdom. They were, however, characterized by high-quality material, excellent techniques of manufacture, and a remarkable final surface treatment. The royal architects also placed high emphasis on creating a unique system to close the sarcophagus in order to make it difficult for robbers to break into.

A total of 18 sarcophagi have been preserved from the Old Kingdom, which includes both well-preserved specimens and sarcophagi known only from fragments. The most problematic in this regard are the sarcophagi from the Fifth Dynasty, of which only one well-preserved sarcophagus, of Unas, still exists.

The sarcophagus of Djedkare-Isesi, the penultimate ruler of the Fifth Dynasty, was found, like other sarcophagi of kings of this period, broken into many large and countless smaller fragments in the burial chamber of his pyramid (Maragioglio, Vito and Celeste Rinaldi 1962. *Notizie sulle piramidi di Zedefrâ, Zedkarâ Isesi, Teti*. Torino: Tip. Artale: 27–28). The most recent project on the exploration, documentation, and conservation of the pyramid complex of this king headed by Mohamed Megahed (CIE) concentrated among many other issues on the sarcophagus of the king. The author of this abstract had the opportunity to collaborate on this project, and her main task was to reconstruct, if possible, the original shape of the sarcophagus, both its lid and the case.

This abstract aims not only to present the preliminary results of this research, but also to fill in the gaps in the development of royal sarcophagi. It will show how this specific

sarcophagus fits in with other royal sarcophagi from the Old Kingdom period in terms of the material used, the quality of workmanship and the typology. Special emphasis will be placed on the individual mechanisms developed to protect sarcophagi against possible looting.

THE ITALIAN MISSION AT THE SUN TEMPLE OF NIUSERRA AT ABU GHURAB
EXCAVATION SEASON 2024 AT THE VALLEY TEMPLE

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Between January 15 and March 31, 2024, the Italian archaeological expedition at the sun temple of Niuserra at Abu Ghurab has conducted its tenth field season. With this campaign the mission has started a new phase of investigation of the solar complex, aimed at the complete re-excavation of the valley temple. This part of the monument was only partially explored by Borchardt during the latest phases of his 1901 campaign. Borchardt in fact had to stop after less than two weeks of work on account of the high level of the groundwater table. Consequently, many aspects of the plan and architecture of the valley temple remained unclear as much as its precise extension on the front side, where the existence of a small village, the so-called “city of the pyramid”, was supposed by Borchardt based on the comparison with the hitherto known Old Kingdom royal complexes.

Based on the plan drawn by Borchardt, the 2024 campaign was concentrated on the north-western half of the temple, leaving for the future 2025 campaign the other (south-eastern) half of the complex. The main goal of the mission was not only to study the architecture of the temple but also to document its material culture, which has never been taken into account by Borchardt in the entire solar complex.

The season was very profitable and led to the removal of more than 3 meters of wind blow sand accumulated on the spot since Borchardt’s time as well as to the stratigraphic excavation of around one meter and half of compact Nile mud, accumulated over the original level of the temple pavement over the centuries. In the latter context, which is composed of at least 12 different layers, we found the remains of an incredibly abundant and varied material culture that testifies the reuse of the temple as a small local

settlement starting from the Late Old Kingdom and up to the early Middle Kingdom, with a major occupation phase dated to the First Intermediate Period.

Eventually, the excavation also provided us with a much clearer picture of the original plan and architecture of the valley temple in the time of Niuserra, especially in concern with the area of the main entrance gateway, featured as a portico with granite columns, and the secondary entrance, located on the western side of the complex and characterized by a monumental and well preserved quartzite doorway.

THE SOUTH TEMPLE OF SENWOSRET III AT DAHSHUR: RECENT EXCAVATIONS

ADELA OPPENHEIM

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The most enigmatic structure in the Senwosret III pyramid complex at Dahshur is the South Temple, so designated because of its position to the south of the king's pyramid. The area was first haphazardly explored by Jacques de Morgan in the late 19th century. The Egyptian Expedition of the Metropolitan Museum excavated parts of the temple in the mid-1990s and resumed comprehensive work there in 2017. Construction of the South Temple followed that of the Pyramid Temple, which was built in the traditional location adjoining the center of the pyramid's east side, but at the reduced scale of 15 x 18 m. The precise date of the South Temple's construction remains uncertain, as is the reason Senwosret III chose to build a diminutive pyramid temple and subsequently construct a much larger temple (ca. 47 x 76 m) that was physically separated from his pyramid.

As is the case with all aboveground structures in the Senwosret III complex, the South Temple has been reduced to a mud brick subfoundation that reveals little about the original arrangement of chambers, halls, and courtyards. It is only through the study of masses of architectural, relief, and statue fragments that it is possible to arrive at any understanding of the its original purpose and meaning. The presence of papyrus bundle columns in two sizes, as well as lotus columns, show that the temple included several columned spaces. Hardstone fragments indicate that the temple contained perhaps as many as ten statues, most in granodiorite, including at least one colossal statue whose facial features diverge from the distinctive visages of Senwosret III; the stylistic variance may reflect something about the meaning of the temple. The relief fragments excavated thus far include themes related to offerings presented to the king, processions of deities, conquest of foreigners, and rituals enacted with large-scale deities. Blocks found in 2023 show high-ranking officials standing behind the king, one of the few instances in which historical persons other than members of the royal family are depicted in the complex. A prominent theme appears to be the *sed*-festival, attested both in relief fragments and statuary. All of the themes thus far identified are known from earlier pyramid temples,

suggesting that changes in meaning were conveyed through a seemingly new architectural form rather than decoration.

This talk will review the current understanding of the south temple and the possible interpretations of its function: a temple that combined royal and deity cult, a structure related to an actual or desired *sed*-festival, or a sanctuary related to solar cult.

RELIGIOUS TEXTS FOR QUEENS?

THE CASE OF KHENTKAUS II AND THE OWNER OF PYRAMID AC 22 FROM ABUSIR CENTRE

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It is a well-known fact that queen Khentkaus II played an important role in the mid-Fifth Dynasty, ensuring the succession to the throne after the death of her spouse, king Neferirkare. Her unique status was demonstrated not only in the exceptional and debatable title *mwt nswt bity nswt bity*, but also in the architecture of her funerary monument (representing a pyramid complex with a satellite pyramid), burial equipment and in maintaining her mortuary cult (witnessed by fragments of a papyrus archive found in her mortuary temple). Her pyramid complex at Abusir Centre (AC 14) was built to the south of her husband's pyramid complex.

On the contrary, the owner of the second discussed monument, the pyramid complex AC 22 (Lepsius no. 24), built to the east of the pyramid complex of king Ranferet and south-east of the one belonging to Khentkaus II in Abusir Centre, is not determined precisely. Whoever it was, she represented an important member of the royal family, as demonstrated by the inclusion of the satellite pyramid in it and by the quality of rather well-preserved burial equipment unearthed in the burial chamber. Nevertheless, the Pyramid AC 22 can be attributed to Reputnub, a less-known queen who was probably a spouse of king Nyuserre, one of the most important rulers of the period under survey.

What queen Khentkaus II and the owner of Pyramid AC 22 (Reputnub?) share is not only their significant status but also particular objects in their burial equipment: inscribed wooden planks that may come from a chest or a coffin. The texts on the planks have been identified as religious by the present authors (Peterková Hlouchová – Krejčí "Towards the Origins of the Pyramid Texts", JANER, 2024, *forthcoming*).

This paper aims to investigate the significance of both owners of the two pyramid complexes on the one hand, and on the other to explore whether the presence of these inscriptions underlines the exceptional status of the royal ladies, and to compare them

with their later successors, the queens of the Sixth Dynasty buried at the necropolis of Pepy I at Saqqara.

**AN UNKNOWN RELIEF FROM THE TOMB OF THE MEMPHITE MAYOR PTAHMOSE IN AN
ITALIAN PRIVATE COLLECTION**

DANIELA PICCHI

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As is well known, in the early 1800s the Memphite necropolis of Saqqara was heavily plundered by art dealers and agents of the most powerful European consulates. This was also the fate of the tomb of Ptahmose, Mayor of Memphis and Chief Steward in the Temple of Ptah. Over the years various items from this tomb were traced to collections throughout the world and ideally put back together after Prof. Ola el-Aguzy's discovery of their place of origin in 2010. To this nucleus of *disiecta membra* we can now add another relief-decorated block, which shows a ritual of funerary offerings, unfortunately lacking the lower part and without the original polichromy. This relief is preserved in an Italian private collection, almost unknown, whose origin dates back to the 1820-30s.

“WHO AM I?”

ON UNEPIGRAPHIC STATUARY OF THE OLD KINGDOM

GABRIELE PIEKE

Reiss-Engelhorn-Museen Mannheim

Non-royal sculpture is of vital importance not only for the general art history of Ancient Egypt but also for our understanding of funerary contexts and burial customs of the Elite. A rather significant number of tomb statues are attested, particularly from the Old Kingdom, mostly coming from the main cemeteries at Giza and Saqqara, and thus playing an important role for the furnishing of elite funerary monuments of that period. Taking the serdab finding of princess Sheretnebtj at Abusir-South as a starting point, the paper will discuss the case of unepigraphic tomb sculptures. Egyptological standard theory has pointed out the necessity for statuary to be inscribed with the name of the depicted person, and has defined such an identification as a need for the function of the so-called “living image” and its specific role for the person’s afterlife. However, the fact that statues were discovered not only in the serdab of a 5th dynasty princess but in a number of other tombs, which also lack any inscription in form of titles and name of their owner has received less attention. Consequently – at least in the case of multiple burials within a tomb – this directly leads to problems of identification.

In the wider context of unepigraphic statuary of the Old Kingdom, it seems relevant that some statues indicate prefabrication in a workshop, with the name and title(s) of the owner only added subsequently. A certain inconsistency between inscription’s position and layout and the general concept and style of the rest of the sculptural work, which can regularly be observed on many types of statues, provide an indication for such practices. These findings point either to the involvement of several artists creating the sculpture or to a specific process of manufacturing within the workshop. In addition, some statues seem to testify to the fact that the inscription was incised only at a later stage, when the sculpture was already fully painted, which is in contradiction to an otherwise attested sequence of work. Consequently, this kind of disregard for the statue owner’s identification by name and title seems to contradict, to some extent, the

postulated impact of statue inscriptions in the funerary context. These indications somewhat challenge the above-mentioned interpretation of the functional capability of tomb sculptures depending on a mandatory identification of the represented person(s). In addition, the number of uninscribed sculptures and the described work procedures touch upon very relevant questions as to the general commissioning of statues and the related concepts of the tomb owner's portrait.

MEANWHILE...AT GIZA: THE CENTRAL FIELD CEMETERY IN THE FIFTH DYNASTY

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Despite the southern shift of the royal necropolises during the Fifth Dynasty, the Giza Plateau continued to serve as a non-royal burial site until the end of the Old Kingdom. While motives for choosing Giza as a necropolis after the Fourth Dynasty vary from royal cultic activities to generational funerary traditions, the settlements near the cemetery reveal a more complex picture of human activity on the plateau.

Adjacent to the Old Kingdom settlements is the “Central Field,” a cemetery that obtained its characteristic landscape as a quarry basin during the construction of the Khufu pyramid. Although historiography often associates the Central Field with the Fourth Dynasty, the majority of tombs date to the Fifth and Sixth Dynasties. Despite its significance in the history of the Giza necropolis, the Central Field has not been extensively studied since Selim Hassan’s excavations in the early 20th century.

As part of my ongoing dissertation research, this paper shares new documentation in the Central Field, particularly several unpublished examples of Fifth Dynasty mastabas and their unique characteristics within the quarried landscape. These include the tombs of Khafreankh (G 8840) and Nisutpunejtjer (G 8740), which were excavated prior to the Egyptian initiatives, as well as published tombs whose owners may have been mentioned in the Abusir archives: Rawer (G 8988) and Khuwiwer (G 8764 = LG 95). An analysis of construction practices in the cemetery, combined with the social history of those buried there, may offer a clearer understanding of the network of interactions between Giza and the southern Memphite cemeteries.

CHRONOLOGICAL MODELLING OF THE ANCIENT EGYPTIAN OLD KINGDOM

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The MERYT project aims to establish an accurate, high-resolution, multi-technique chronological model of the Egyptian Old Kingdom (~2900-2200 BCE) that reconciles Egyptological and analytical data. It addresses two major issues: 1) to develop a definitive chronological framework of the Old Kingdom by building a statistical model based on Bayesian inferences, reigns by reigns; 2) to better investigate the specific environmental conditions in Egypt and confront them to the IntCal ¹⁴C calibration curve's data, to make the ¹⁴C dating method more competitive for this geographical area.

Through a historical approach, textual sources preserving chronological evidence have been re-evaluated in order to establish the most accurate estimates of the lengths of each king's reign, given our state of knowledge. Using an archaeometrical approach, series of more than 100 radiocarbon dates have been carried out at the IFAO lab on samples collected directly from several ongoing archaeological excavations in Egypt, the discovery contexts of which were clearly associated with a particular historical reign (from the First to the end of the Sixth dynasty). Particular developments have been

made on the analyses protocols of textile and bone samples, in order to ensure their dating and to accurately model their results. The possibility of a specific regional shift in the ^{14}C content of the atmosphere due to a seasonal effect on the Egyptian territory has also been considered and studied through the analysis of botanical samples from the Herbarium of the Muséum National d'Histoire Naturelle in Paris. The whole data is finally confronted in a Bayesian statistical model whose formalism is developed for this project.

The MERYT model will suggest the first absolute holistic chronology of the Old Kingdom gathering Egyptologists and archaeometrical investigations. The impact will go beyond Egyptology alone and will potentially affect the chronological knowledge of civilizations of the Eastern Mediterranean in the Third Millennium, highlighting the contribution of analytical and modelling approaches to archaeological research.

This talk will present the first results of the MERYT model and be completed by open perspectives, bringing new insights on the start of the Egyptian state.

LIMITED DOCUMENTATION FROM NORTH SAQQARA

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We are still far from understanding the use of the North Saqqara plateau in the Early Dynastic Period. One of the key aspects that have prevented scholars from making progress in researching this important archaeological site is the lack of published data about many of the structures that were excavated in the area. With my doctoral dissertation, I started a project that required revisiting the documentation of the works of Walter B. Emery and Cecil M. Firth in the 1930s and 40s. This documentation was complemented with newly collected survey data, and I have been able to reconstruct the layout of a sizable portion of the cemetery. There are, however, significant limitations to the documentation. The work of Emery was pioneering in many respects: a full monograph dedicated to a building made of mudbrick was unprecedented when the publication of the tomb of Hemaka came out in 1938. Nonetheless, the means used in the documentation of the time were often not as accurate and meticulous as we would have wished. Moreover, many of the documents seem to be lost for good.

As a result of my research, I have become acquainted with this relevant body of archives. In this presentation, I will focus on the archival work of my research. I will show how I have worked and organized it, as well as the open-source digital asset management software that I have used to organize it in an online repository. I will provide a detailed overview of the materials that I have been able to find, and assess the limitations that will be hard to overcome with the documentation that is missing. I will use specific tombs as illustrative case studies to show the various degrees of information available.

**RAISED RELIEF IN OLD KINGDOM MASTABA CHAPELS:
SILHOUETTES, MODELLED DETAILS, AND PLASTER AUGMENTATION**

ANN MACY ROTH

New York University

The subjects depicted in raised reliefs produced by the ancient Egyptians of the Old Kingdom for their tombs and chapels were never truly three-dimensional sculpture like many of the ancient Greek reliefs, with fully rounded and complete representations buried to varying depths in the solid background space of the wall. Instead, the human figures, animals, equipment, and other objects shown were merely outlined as silhouettes, and left at a higher elevation than the background surface from which a layer of stone had been cut away. These raised silhouette scenes varied in the degree to which they were subsequently modeled and detailed, ranging from slightly round edges and a few incised and modeled details, to a more rounded and fully modeled sculpture, contoured and extending to several different levels. In some periods and contexts, the silhouettes became even more sculptural, in that they were augmented by plaster that was added and modeled to form more detailed features, most often including the cheeks of the human faces.

Using a collection of Saqqara mastaba chapels, this paper will identify and analyze the patterns and the contexts in which different relief technologies appear, as well as the features of Old Kingdom raised reliefs that were emphasized by more extensive detail and modeling (noting those details that were not fully carved as well). Special attention will be paid to the modeling of relief features in plaster, a technique that has rarely been identified and studied. These patterns of differing technical developments seem likely to offer chronological clues, and hence be useful in dating Old Kingdom reliefs (a long-term goal that we more often approach iconographically). In addition, the patterns to be found in the elements of the human and animal figures and equipment that are emphasized by modeling or augmentation may also point to the functions of scenes and their meaning.

PRELIMINARY RESULTS OF THE POLISH-EGYPTIAN ARCHAEOLOGICAL MISSION

“MASTABAT EL-FARAUN” IN SAQQARA

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In 2024, for the first time in exactly 100 years, archaeologists returned to one of the least known royal tombs of the Old Kingdom, the Mastabat el-Faraun. During the first two seasons 2024-2025, the Polish-Egyptian mission of the Institute of Mediterranean Cultures of the Polish Academy of Sciences and the Ministry of Tourism and Antiquities of the Arab Republic of Egypt conducted intensive research. An interdisciplinary team of archaeologists, architects, geologists, surveyors and conservators conducted archaeological works both inside the mastaba and around the tomb complex. The results of the preliminary research shed new light on the structure itself (its construction and building methods), the history of the tomb's use until the 6th century AD, as well as the history of its discovery and research.

REVISITING THE 13TH DYNASTY PYRAMID COMPLEXES
NEW INSIGHTS FROM ‘LATE’ POTTERY ASSEMBLAGES FROM THE ARCHAEOLOGICAL
SURVEYS AT SAQQARA-SOUTH, DAHSHUR, AND MAZGHUNAH

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Recent archaeological discoveries in the Memphite Necropoleis and Abydos have brought the history of the enigmatic late Middle Kingdom and early Second Intermediate Period back into the Egyptological focus. Yet, the later uses of the area of the pyramid complexes of the 13th Dynasty in Saqqara-South, Dahshur, and Mazghunah have received only little attention so far. This paper will present the hitherto unpublished ‘late’ pottery assemblage collected during the archaeological surveys of the German Archaeological Institute in Cairo and the Free University of Berlin. From 1997–2000, a team led by Nicole Alexanian covered the area of Dahshur-South to Dahshur-North, and in 2006, the survey area was extended towards Mazghuneh in the South and Saqqara-South in the North by Robert Schiestl. Previous publications of ‘later’ (i.e. New Kingdom and Late Period) material from the area only presented a range of complete vessels from funerary contexts, in a rather cursory manner. The analysis of the new material not only offers a fresh insight into the chronological and typological range of pottery from these sites, but also sheds lights on the potential human activities undertaken there. These range from visits of passing travellers and more purposeful investigators, to the systematic deconstruction of the structures for the procurement of building materials, as well as renewed burial activities. Hence, this paper aims to discuss the later phases of the pyramid complexes of the 13th Dynasty, contributing to our knowledge of the later interaction of people with these monuments. Overall, the findings challenge previous assumptions about site abandonment and reveal a much more complex history of use.

**LATE PREDYNASTIC AND EARLY DYNASTIC NON-ROYAL CEMETERIES OF THE MEMPHITE
REGION AS PHYSICAL AND RITUAL LANDSCAPES. CASE STUDIES OF ABU RAWASH AND
HELWAN**

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The chain of Late Predynastic and Early Dynastic cemeteries lying on the desert fringes along both banks of the Nile, from Abu Rawash in the North to Tarkhan in the South, is of key importance for the study of the early stages of development of the Memphite area. Over the centuries of growing social complexity in the region, various burial grounds gained or lost importance. Their internal structure evolved as well, shaped by various royal and non-royal agents, and reflected current political and religious agendas. Situated in the real physical landscape, these burial grounds, when analysed together, have a potential to give evidence on the important processes taking place in the area. The aim of the present paper is to analyse two Predynastic and Early Dynastic cemeteries lying in the vicinity of modern Cairo – Abu Rawash and Helwan, in order to see how the physical landscape they lie in shaped their development as ritual landscapes. Although separated by time and physical space, these cemeteries constitute one distinct corpus of the mortuary evidence. The obvious geographical and chronological differences make it difficult to access and compare the two cemeteries and the burial structures forming them properly. To overcome these difficulties in comparison of the individual burial structures, the status index is introduced. By analysing such important criteria as the size of the tomb, its position in the cemetery context, the use of stone in its construction, the burial goods found, epigraphic evidence and other parameters, it is possible to assign a status index to it, which will simplify comparison of individual burials as parts of a larger whole.

THE CLASSIFICATION AND CHRONOLOGY OF THE PIT BURIALS FROM THE LATE SECOND INTERMEDIATE PERIOD TO THE NEW KINGDOM AT NORTH SAQQARA

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In the transition from the late Second Intermediate period to the reunification at the beginning of the New Kingdom, we can recognize the several phases on burial customs. These changes were identified mainly through the research about the elite burials. On the other hand, compared to the burial customs of the elite, the funerary beliefs, customs, and practices of the non-elite have been insufficiently studied (Goulden 2017: 1). This awareness of the issue has led to recent research into the extent to which elite burial customs have influenced non-elite (Goulden 2017). However, few studies have focused on pit burials in non-elite burials (Staring 2023: 210). The Saqqara necropolis is the site where pit burials are relatively well documented, reported to the north of the Teti Pyramid and the south of the Unas Pyramid. However there are few studies that go beyond the recent corpus by Nico Staring.

Under these circumstances, the Japanese-Egyptian Mission to North Saqqara has conducted excavation in 2023, and discovered a new cemetery of pit burials thought to date to the first half of the 18th Dynasty. In this excavation, new good data about pit burials were added at north Saqqara (Kawai et al. forthcoming).

In this presentation, as an essential step for future research on pit burials, I will collect and classify the pit burials in two cemeteries at North Saqqara (the north of Teti Pyramid and the Japanese-Egyptian Mission's excavation site at the eastern escarpment of the North Saqqara plateau), where there is relatively abundant material. I will analyze the chronological changes of each type and the differences between two cemeteries. The classification is based on the following aspects: burial posture, head orientation, burial axis, burial equipment, and burial location. The pit burials classified according to these perspectives will be chronologically aligned according to the archaeological context and the burial equipment such as pottery, stone vessels, and scarabs. After that, I analyze the proportions of each type by period. Based on these results, I will discuss the factors that

led to the wide variety of burials during the same period by utilizing the degree of shared burial norms and the landscape of North Saqqara in this period (topography, the course of the Nile River, structures from the previous period and large tombs in the vicinity during the same period). In doing so, I present the characteristics of the pit burials at Saqqara.

Goulding, E. 2013 *What Did The Poor Take With Them? An investigation into Ancient Egyptian Eighteenth and Nineteenth Dynasty grave assemblages of the non-elite from Qau, Badari, Matmar and Gurob*. London: Golden House Publications.

Kawai, N. et al. forthcoming A Preliminary Report on the Seventh Season of the Excavation at North Saqqara. *Ancient Civilizations and Cultural Resources*. Kanazawa: Kanazawa University.

Staring, N. 2023 The Saqqara Necropolis through the New Kingdom: biography of an ancient Egyptian cultural landscape. CHANE 131, Leiden: Brill, 1566–2055.

PRELIMINARY RESULTS FROM THE LEIDEN-TURIN ARCHAEOLOGICAL EXPEDITION TO SAQQARA 2017–PRESENT

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The southern end of the North Saqqara plateau (south of the causeway of Unas) has been subject to systematic archaeological exploration since 1975. The excavations have uncovered a large cemetery of long-lost tombs built for some of the most prominent citizens of New Kingdom Memphis. Since 2017, the joint Leiden-Turin Archaeological Expedition has adopted a biographical perspective in trying to understand the long-time interaction between people and landscape.

This paper will highlight some of the results of work in the area north of the late-18th Dynasty tomb of Maya – an area that has been in continuous use from the Early Dynastic period to the present day.

The New Kingdom tombs found in the study area were probably built in a space between two monumental structures: the tomb of Maya and his hypothesised neighbour in the north. Most of the tombs are marked by fairly modest tomb chapels aboveground. This paper will introduce two of these tombs: the early-Ramesside tomb of Panehsy, steward of the Memphite temple of Amun; and Yuyu, a Ramesside maker of thin gold (gold foil). The tombs were used until long after their commissioning patrons had died. While the tomb of Yuyu is still under excavation, the preliminary results of the excavation of Panehsy's tomb indicate that it had been used for burial and other purposes (such as stone quarrying) during various periods in time. The whole area is further covered by the remains of Late Antiquity occupation layers.

The precise date and socio-historical context of the 7th century occupation layers remain difficult to interpret, not in the least because the contexts were often badly disturbed by 19th-century antiquities hunters. The remains of floor levels, garbage deposits, plastered installations, a drainage system, foundations of reused limestone blocks and much worn mud-brick walls indicates at least three different phases of occupation. The features

include storage installations and discarded tools like a whetstone and flint knives suggest production activities. The layers also contained the burials of two children. The paper will explore how these structures should be interpreted in the context of contemporaneous traces in the area south of the Unas causeway, including the nearby monastery of Apa Jeremias.

SELLING SAQQARA: THE GLOBAL DISPERSAL OF SAQQARA'S MATERIAL HERITAGE DURING THE 'VEILED PROTECTORATE'

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This paper will discuss a series of object extractions from Saqqara in the late 19th and early 20th century, following the period of British invasion of Egypt (1882) until the outbreak of World War I (1914), the so-called 'veiled protectorate.' During this period, objects from the Saqqara necropolis were sold by the Egyptian Antiquities Service and scattered across museums around the globe, including at least thirteen mastabas or tomb chapels offered to museums in Europe and the US as well as countless individual objects and artworks. The Saqqara archaeological site, exclusively under excavation by the Antiquities Service at this time, was the type-site for these direct sales.

Important recent scholarship has illuminated the private antiquities trade and the mechanisms for the disbursal and sales of Egyptian objects outside the country from the mid-19th – mid-20th century, a period where such trade was nationally regulated with a series of increasingly stringent laws and enforced by Egypt's Antiquities Service. In this presentation, the author will trace the history of one such exported object, the stone sarcophagus lid of 26th Dynasty elite Psamtek, excavated from its shaft tomb south of the pyramid of Unas at Saqqara in 1900 by Alexandre Barsanti and Gaston Maspero. The object was bought by American newspaper magnate William Randolph Hearst, the son of Phoebe Hearst, one of the primary patrons in the 1890s of the University of California and a major donor for the university's first museum, now the Phoebe A. Hearst Museum of Anthropology at the University of California Berkeley. The movement of the Psamtek piece abroad hinged on a series of newly created networks, linking American millionaires, California universities, US and European museums, French scholars, and British colonial administration.

This paper discusses the complex forces at play that made such a purchase and move legally and socially viable and contextualizes this sale within the larger series of monument sales from Saqqara at this time.

PLACE OF ETERNITY
DECORATED BURIAL CHAMBERS IN THE MEMPHITE NECROPOLIS DURING THE OLD
KINGDOM: ARCHITECTURE AND DECORATION

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Over the course of the Old Kingdom, it was the superstructure rather than the substructure that underwent architectural development and evolution of its decorative program. The burial chamber itself showed very little process of transformation and remained undecorated. During the reign of Djedkare Isesi at the end of the Fifth Dynasty, some of the high-ranked officials decided for the first time to depict pictorial representations on the walls of their burial chambers. Thus, decorated burial chambers in private tombs antedate the appearance of the Pyramid Texts in royal funerary monuments. Most of the decoration scheme focuses on the provisioning of the deceased in the afterlife. Generally, the scenes consist of an offering list, depictions of food and drink offerings, and burial equipment. Therefore, these types of scenes correspond to the decorative repertoire employed in the superstructure of the tombs and utterly differ from royal burial chambers which were decorated with religious texts. From the reigns of Pepy I and Merenre onward, the burial chamber decoration became a more widespread practice. Most of these tombs could be dated to the reign of Pepy II. Up until now, 99 decorated burial chambers have been excavated in the Memphite necropolis and about 40 are known from provincial cemeteries.

The present paper aims to examine the development of the architectural and decoration schemes throughout the Old Kingdom, First Intermediate Period and early Middle Kingdom. Specific features that occur in particular cemeteries and the possible mutual relationship between the decorative program employed in the superstructures and in the substructures will be explored and discussed as well.

MARRIAGE STRATEGY IN THE OLD KINGDOM OF EGYPT: THE MATHEMATICAL JOURNEY

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This research aims to provide a comprehensive understanding of the marriage strategies of royal daughters (princesses) in the Old Kingdom of Egypt, highlighting social and political relationships and their impact on the dynamics within ancient Egyptian society. The paper is concerned with the application of specific mathematical methods that help to understand and support the hypotheses put forward by the Egyptologist. The main aim of this paper is to present the mathematical journey that unfolds behind this complex Egyptological problem, making it accessible to a non-mathematical audience.

The Egyptological objective of this research is to elucidate the social and political implications of marriages involving royal daughters and to ascertain how status and power dynamics were affected within both royal and non-royal families with particular focus on the Fifth and Sixth Dynasties. The first attested marriages of royal daughters to non-royal individuals occurred in the early Fifth Dynasty. These marriages had the effect of significantly strengthening the social and political positions of the families involved, thereby conferring upon them a greater degree of privilege. Furthermore, the study investigates the professional backgrounds and titles of the individuals involved in these marriages, comparing the Fifth and Sixth Dynasties. Additionally, the selection criteria for the families in which princesses were married are discussed. It seems plausible that in some cases the position of the father of the princess's husband could have been decisive, as his tomb contained rare materials, and he held higher-ranking titles and functions than his son, who married the princess.

The analysis is based on data from Maat-base, a database of officials (and their titles) living during the Old Kingdom period. The database contains information on more than eight thousand Old Kingdom individuals, including details of their family relationships and their social positions, as indicated by administrative and rank titles.

To achieve the aforementioned research objectives, data science is of significant importance, especially Extract-Transform-Load process and statistical analysis. The initial step is to prepare the data from the Maat-base. As Maat-base contains a substantial amount of detailed information, it is necessary to extract the data pertinent to our specific research objectives. Furthermore, the data must be verified and cleaned, as the Maat-base is filled manually by the Egyptologist. The final data frames of individuals and their marriages are then designed and prepared using a transformation to describe the given Egyptological issue in a broader context. For example, categorical variables are established for observations of specific important titles and rare materials used for burial equipment. To capture the crucial aspect of time, the temporal categorical variable is defined, gathering information about the past and present for each individual male. This approach enables the analysis of the specific family (especially the father) before the princess was chosen as the wife (of the father's son). Finally, the conditional probabilities of occurrences of the observed properties are estimated, and the significance of the chosen characteristics is statistically tested. All statements discussed are accompanied by suitable graphical visualizations, e.g., parallel category plots and boxplots.

**TRACING OFFERINGS AT DJEDKARE'S ROYAL NECROPOLIS:
"TREASURES" FROM A WASTE DEPOSIT LAYER**

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The exploration of Djedkare's royal necropolis at South Saqqara since 2010 brought about rich evidence on the history of this site. Besides the Old Kingdom monuments of the king, his wife Setibhor and other members of the royal family, various later activities have been documented on the site. These include activities related to personal cults of non-royal individuals, evidence of recycling building material and a large secondary cemetery from the 2nd and 1st millenniums BCE attesting to a connection of the local non-elite population to the Old Kingdom monuments.

On the other hand, very little evidence was found concerning the operation of the pyramid complexes themselves, their priests and the duration of the funerary cults of their royal owners. In 2018, we documented a waste deposit layer between the king's and queen's complexes, which seems to relate to this early history of the two monuments. The layer contained above all numerous fragmentary pottery and animal remains, which seems to attest to a long duration of cultic activities in the pyramid complexes. Other finds from this layer are yet to be studied, but at this stage of research, it seems that we can connect the pottery and animal finds from this layer to the royal funerary cults and interpret them as remains of offerings. Even though very fragmentary, the finds from our waste deposit layer indicate continuous cultic activities in Djedkare's pyramid complex during the second half of the 3rd millennium BCE.

**SHIP ELEMENTS AND CONSTRUCTION TECHNIQUES OF THE SECOND BOAT OF KHUFU
FROM THE PERSPECTIVE OF ARCHAEOLOGICAL AND ARCHITECTURAL ANALYSIS**

AYANO YAMADA – HIROMASA KUROKOCHI – EISSA ZIDAN – MONDAH TAHA – SAKUJI YOSHIMURA

Tokyo National Research Institute for Cultural Properties

The conservation and restoration project for the second boat of Khufu began with opening the sealed boat pit in June 2011 and completed the removal of all components from the boat pit to the storage in March 2021. A total of 1700 pieces were collected and are currently being examined and prepared for reconstruction.

It was assumed that another boat of a very similar shape would be buried in the pit before the excavation, but unidentified objects were also recognized. This paper will conclude detailed how similar and difference both boats of King Khufu buried alongside from the perspective of archaeological and architectural views based on the excavation outcomes. It is revealed that the basic structure of the two vessels was almost similar from the hull to the cabin, as well as characteristic construction techniques were installed for both. Meanwhile, only the second boat of Khufu were equipped with structures and elements to attach rowing oars, additionally some differences in the numbering system were used for boatbuilding. The findings which the second boat of Khufu has numerous rowing oars will provide a new consideration on the role of both vessels in the royal funerary rituals of the early Fourth Dynasty and on the meaning of their burial.